

WHAT IS CLAIMED IS:

1. A high-strength, high corrosion-resistant and non-magnetic stainless steel which comprises 0.15% by weight (the same shall apply hereinafter) or less of C, 1.0% or less of Si, 3.0 to 12.0% of Mn, 0.030% or less of P, 0.50% or less of Ni, 15.0 to 21.0% of Cr, 0.70 to 1.50% of N, 0.020% or less of Al and 0.020% or less of O, a remainder of Fe and inevitable impurities.

2. A high-strength, high corrosion-resistant and non-magnetic stainless steel which comprises 0.15% or less of C, 1.0% or less of Si, 3.0 to 12.0% of Mn, 0.030% or less of P, 0.50% or less of Ni, 15.0 to 21.0% of Cr, 0.70 to 1.50% of N, 0.020% or less of Al and 0.020% or less of O, and further comprises one or two or more of 0.1 to 4.0% of Mo, 0.1 to 1.5% of Cu and 0.1 to 0.8% of W, a remainder of Fe and inevitable impurities.

3. A high-strength, high corrosion-resistant and non-magnetic stainless steel which comprises 0.15% or less of C, 1.0% or less of Si, 3.0 to 12.0% of Mn, 0.030% or less of P, 0.50% or less of Ni, 15.0 to 21.0% of Cr, 0.70 to 1.50% of N, 0.020% or less of Al and 0.020% or less of O, and further comprises one or two or more of 0.01 to 0.25% for each of Nb, Ti, V, Ta and Hf, a remainder of Fe and inevitable impurities.

4. A high-strength, high corrosion-resistant and non-magnetic stainless steel which comprises 0.15% or less of C, 1.0% or less of Si, 3.0 to 12.0% of Mn, 0.030% or less of P, 0.50% or less of Ni, 15.0 to 21.0% of Cr, 0.70 to 1.50% of N,

0.020% or less of Al and 0.020% or less of O, and further comprises one or two or more of 0.1 to 4.0% of Mo, 0.1 to 1.5% of Cu and 0.1 to 0.8% of W and one or two or more of 0.01 to 0.25% for each of Nb, Ti, V, Ta and Hf, a remainder of Fe and  
5 inevitable impurities.

5. The high-strength, high corrosion-resistant and non-magnetic stainless steel according to any one of claims 1 to 4, wherein 0.0005 to 0.0100% for each of one or two or more of Ca, Mg, B and REM are contained instead of the same amount  
10 of a part of the remaining Fe.

6. The high-strength, high corrosion-resistant and non-magnetic stainless steel according to any one of claims 1 to 4, wherein one or two or more of 0.03 to 0.4% of S, 0.005 to 0.05% of Te, 0.02 to 0.20% of Se and 0.0002 to 0.02% of Ca  
15 are contained instead of the same amount of a part of the remaining Fe.

7. The high-strength, high corrosion-resistant and non-magnetic stainless steel according to claim 5, wherein one or two or more of 0.03 to 0.4% of S, 0.005 to 0.05% of Te, 0.02 to 0.20% of Se and 0.0002 to 0.02% of Ca are contained  
20 instead of the same amount of a part of the remaining Fe.